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Address M. B. BATEHAM, Columbus, O.

PUBLISHER'S NOTICES.

Our Head!—The Engraving at the top of this page caused some delay and vexation by its non-arrival in time for our paper of 1st inst.—part of the edition was printed without it, and the balance was not done as well as we had intended, nor is it quite right yet. We will effect further improvement soon.

☞ Errors may have occurred in entering names of subscribers on our new books; and we hope all who fail to receive their papers correctly will immediately inform us, through their post masters or otherwise. Some of the letters we receive, give the name of the *township* in which subscribers reside instead of the Post office.

A Thousand Thanks to our friends for the noble list of subscribers sent us for the new volume. Many we know will rejoice to learn that the number received thus far exceeds that of the same period in any former year.

☞ A little effort by each one, at this favorable season, would soon double the number of our subscribers and give a new impulse to the cause of improvement throughout the State. Shall it not be done?

A Glance at Patent Churns.

We notice by our exchanges that great efforts are being made throughout the western States especially, to palm off upon the farming public various kinds of patent churns, or to induce many mechanics to give large sums for the Right to manufacture the same—while in a majority of cases, we believe, the articles are absolutely worthless, or inferior to older kinds that might be procured for less money. We have repeatedly cautioned our readers against purchasing these new fangled churns until after they have been more fully tested; and we are happy to known that our remarks have saved not a few of our friends from imposition. To set this matter in a clearer light before our readers, we will glance at a few of the different churns, now most prominently before the public—some valuable, some useless.

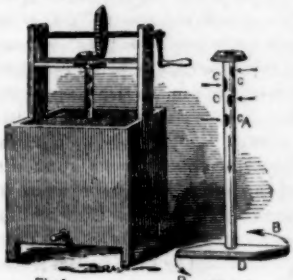


Fig 1. Fig 2.

Lewis & Johnson's Atmospheric Churn.

This was introduced to the public, from St. Louis, the past summer, and it is said the inventors realized a splendid fortune by the sale of Rights, even before the article was fully tested. The first appearance of this churn, and its operation as exhibited were well calculated to impress minds in its favor, and we confess to having been at first

disposed to recommend it. On further trial, however, and when tested with other churns, it was found that although the "atmospheric" would produce butter under favorable circumstances in the shortest time, it failed to produce *as much* from a given quantity of cream as the older kinds, and the *quality* was not as good. These facts being announced soon consigned this to the shades, to the great pecuniary loss of some who had purchased Rights.

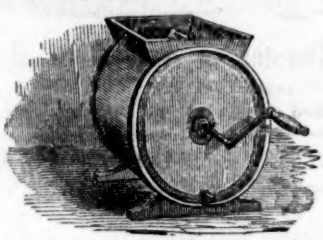
Hamilton & Shires' Spring Churn is the next in order of time. This originated in Cincinnati and was extensively exhibited for a time, but did not seem to *take* very well with the public, notwithstanding the glowing advertisements and pictures to match. It consists of a large tin can like those used by milk pedlers, with a double cover, and set on the end of a board about eight feet long so placed as to spring when pressed down by the foot, thus shaking the can and thereby churning the milk, *a-la-Mexicana!* This, it was confidently asserted, would supersede all other churns; and, with it, a woman could churn with as much ease and in the same way as rocking a cradle, while engaged in knitting or reading! In regard to the operation of this churn, we think any sensible person on witnessing its performance would be satisfied it was a humbug.

"*Combination Churn*" is the name given to another of the *atmospheric* kind, described in Eastern papers as the invention of N H. Barlow, of Homer, N. Y. This consists of a common dash churn, the handle consisting of a hollow tube open at the bottom and closed by a valve opening downwards at the top; so that when the dasher was raised the valve opened and air passed down into the cream, and when it descended the valve closed to prevent the air and cream from flying out. This, it is said facilitates the churning; and we do not doubt it; but the difficulty of keeping the hollow dasher clean, and of preventing the escape of cream from the valve at the top, to our mind more than counterbalances the advantages.

Colver's Rotary Concave Beater Churn.—This is another Cincinnati invention, we believe; and like others of its tribe, is not deserving the commendations bestowed on it. By this we do not mean that it is not a good churn, for we think it is at least superior to either of the foregoing; but we do not believe it possesses any *new* principle of the least value, over the ordinary cylinder churns which have been long in use, and two kinds of which are described below. It is claimed as a patent Right, and we believe many sales of territory have been made for it; but all that a patent can possibly be made to cover is the *concave* form of the beater. This we are aware is claimed as a *great* advantage, inasmuch as it makes the churn *atmospheric*, but we cannot see in what way air is to be diffused through the cream by these beaters; for admitting that it is carried in by each descending stroke, it must be carried through and pass out again without diffusion, being confined in the concavity of the wood.—Hence, we believe that this concavity is of no advantage, and if tried with either of the following kinds it would be found to possess no advantage over them.

Gault's Rotary Churn.

This is much approved, and in very common use throughout the Eastern States. In the above cut it is represented as open, showing the shaft and beaters inside of the top. This operates precisely the same as Colvers, excepting the beaters are plain instead of convex, and the shaft passes through the top instead of the middle of the box.



Kendall's Cylinder Churn.

This we believe is the most popular churn at the present time in all places where it is known, and greater numbers have been made and sold within a few years past than of any other kind. It is a simple cylinder, with a hopper and close cover at top, and a polished iron shaft passing through the middle, on which the arms or beaters are placed, and which is easily taken out when desired, for cleaning, or removing the butter. They are neatly and strongly made—of various sizes—price only from $2 to $4. This and the foregoing are for sale at Emery's Agricultural Warehouse, Albany, N. Y., and various other places.

Crowell's Thermometer Churn.—This is claimed as the *Ne plus ultra* of improvements in churns, and we think with some truth. In its mode of operation it does not differ materially from Kendall's, but it possesses this great advantage: On the outside of the bottom is a second box or chamber made of zinc, designed for holding several gallons of water, warmed or cold, according as may be required to increase or reduce the temperature of the cream within the churn while churning. Then a thermometer is placed securely in the side of the churn in such a position as to show the temperature of the cream and thereby indicate the proper degree of heat to be applied or abstracted to produce the best quality of butter in a proper space of time. This, all experienced butter makers know, is of the greatest importance; and it is to a want of attention to temperature or the difficulty of regulating it, that most of the difficulty in churning is to be attributed. From 61 to 63 degrees is found to be the best temperature of cream for churning; and it is also found that from 15 to 20 minutes churning will produce better butter and more of it, than a shorter period. Hence those churns which are said to bring the butter in

VOLUME TIGHTLY BOUND

5 or 7 minutes are to be looked upon with distrust.

In regard to the last named churn we have received the following as postscript to a letter from one of our subscribers in the north part of the State, which we cheerfully subjoin:

FRIEND BATEHAM:—If any of your friends or subscribers want a good churn, tell them to get *Crowell's Patent Thermometer Churn*, and they will not repent of their bargain. I bought one of my friend STAIR, at Cleveland, and have used it some months with entire satisfaction.—It has a double bottom of zinc, into which, if the cream is too cold, I put hot water, if too hot, cold water; I get the temperature to about 60 degrees and work away for about 20 to 30 minutes, and most excellent butter is the result. Price $5,50.

Yours, truly, E. W. SLADE.

Osage Orange--Culture of Hedges.

DIRECTIONS FOR PLANTING AND TRIMMING THE HEDGE.

Having given in our last number full directions for preparing and sowing the seed, we will now suppose the plants one year old, and it is desired to set them to form a hedge.

If the ground is poor, or has a hard subsoil, it should be enriched and trenched two feet in depth, to encourage the downward habit of the roots. Land that is good enough for corn, with a gravelly or porous subsoil, will not need deepening or enriching; only such preparation as will leave a clean mellow bed for the plants. The surface should be slightly rounded, so as to allow it to settle without forming a hollow. Rake the top smooth, and it is ready for planting.

Stretch a line where the hedge is to stand, and, with a spade or shovel, cut a trench on one side one foot in depth, leaving a perpendicular side exactly under the line against which to place the plants.

Now bring the plants, and prepare them by cutting off the tops, (which are usually killed by frost,) down to within an inch of the ground or top of the root, and also cut off the lower end of the root, if more than 11 or 12 inches long, so that when stood in the trench the whole of the root will be beneath the surface. Stand them upright against the straight side of the trench, and fasten them in position by drawing a little earth down with the hand; or, if two persons work together, one can place the plants in the trench while the other fills in earth with a shovel. In this way the work can be done very rapidly. Finish by treading the soil firmly about the roots, and leveling off the surface, leaving not over an inch of the tops of the plants above ground. Then they will throw up two or more shoots each.

But we have not stated how far apart the plants should be set in the row. On this point there is some diversity of opinion, and the planter must be governed somewhat by circumstances, such as the abundance or scarcity of plants, the nature of the enclosure, &c. If for a garden fence, where a very close hedge is desired, we should set the plants in two rows, one foot apart, and the plants one foot apart in each row, those in one row opposite the vacancies in the other, thus—

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We are not sure, however, that somewhat greater distance, say 15 inches between the plants, would be better. Our oldest hedge is planted as above, and we think it is closer than is really necessary. Our second hedge is planted in a *single line*, the plants eight inches apart. This is designed for a garden fence, along a street, and we expect to make it close enough to stop the smallest as well as the largest intruders. For a division fence on a farm, or along roadsides of ordinary fields, we should set the plants *nine* inches apart, in a single line, or twice that distance in a double line.

The time for planting need not be very early, as the buds do not start until late, say about the first of May in this climate; though of course it may be done earlier if convenient.

After culture. Keep the hedge row clear of grass and weeds the first season—after which no particular care will be necessary on this point.

In the spring, one year after planting, fill up any vacancies that may chance to occur, with good strong plants two years old, a few of which should be saved for this purpose; though it is rare that the plants die. This done, head down the whole row *to within 6 or 8 inches of the ground.* Cut all off, without fear or pity, no matter how beautifully the plants have grown. It is the surest way to make a good hedge; and the growth will be enough thicker and handsomer the following season, to more than compensate for the seeming waste of material. This plan we prefer, on the whole, to the one we have before tried and recommended, which is as follows:

Cut off all the shoots to within six inches of the ground, except one to each root; leave this about eighteen inches high, (cutting off the top,) as represented at the right end of the above cut; then begin at one end of the line, and bend the top of the first stem down to within 8 inches of the ground, fastening it with a hooked peg, then bend the next one so that the end will catch under the curve of the first, and so proceed throughout the line. The thorns will hold them fast, and the new shoots will lock all firmly together, making the bottom of the hedge very close. This mode, however, will appear difficult to some minds, and we do not recommend its general adoption, especially for farm purposes. Indeed we are by no means certain but that cutting *all* the stems off together, the first spring after planting, will make as close a hedge as this method. We notice that some western cultivators recommend simply cutting off within one foot of the ground, the first year after planting, and within two feet the second, three feet the third, &c. We think one foot is not close enough the first year, where the smallest animals are to be fenced against. And it is best to err on the safe side, if either, inasmuch as the evil cannot be remedied if the hedge is not made thick at the bottom at first.

The second year, if on good soil, there will be from 5 to 10 shoots, 5 to 7 feet in height from each plant, be-

sides many side branches. Now the *knife* must again be used without fear. Cut down all to within *eighteen inches* of the ground; or if the growth is very strong, and the hedge quite thick at the bottom, *two feet* may be allowed. Trim off, also, the side branches to within 4 to 6 inches of the main stem. Gather up the trimmings with a fork and burn them—the work is done for this year.

The third year, your hedge will begin to present a formidable appearance, and, under ordinary circumstances, will serve the purposes of a fence, when the summer's growth is attained. But first it must undergo another severe trimming in the spring—cutting down the upright shoots to within three, or at most four feet of the ground, according to the strength and closeness of the growth; also, clipping the side branches within narrow limits. This work of trimming may now be done with greater ease and expedition by means of an implement known to old country men as a *bill hook*, a representation of which is annexed.

The blade is 14 or 15 inches long, and about 3 inches wide. The back is rounded towards the point, and sufficiently thick (say one-sixth inch,) to give it weight for striking a blow as with a hatchet. The edge thin and sharp, and curved or slightly hooked at the point—the handle seven inches long. It can be made by any cutler or good blacksmith. With this tool, and a pair of thick buckskin gloves, the trimming can be done quite rapidly. Another form of trimming knife will also be found quite useful, and should be procured by every person who has a hedge, especially for using after the third or fourth year; we annex the description.

This differs from the above in having a handle three feet long, and slightly bent, so that it will balance well in the hand. The blade is two feet long, slightly hooked, and made as *light* as is consistent with strength. Of course it should be made of the best steel, and kept very sharp. It is used with both hands, giving a rapid upward stroke, in trimming the sides of the hedge, and horizontally at the top. After a little practice, with the use of these implements, any man can trim a hedge with great rapidity; and the necessity there is for doing it every year will not be considered much objection to their culture.

The fourth year after the hedge is planted, it may be allowed a height of four or five feet, and it will now serve as a perfect protection to the enclosure. Care must be taken to trim the sides, as well as the top, closely each spring, otherwise the hedge will soon occupy too much space, and appear unsightly. Where the growth is quite strong, and neatness of appearance is desired, it is well to give a summer trimming in July or August, each year, from the 4th to the 7th or 8th year; after which time the growth will become slower, and less trimming will suffice.

P. S.—On Sowing the Seed.—Since our last paper, we have received letters from several persons who procured seed at this office last spring, and who have succeeded perfectly by following our directions—some by the freezing process, others by soaking the seed *five or six days* in a warm room, and sowing in good soil early in May.

A Good Book for Farmers—Botany and Agriculture.

"A Class Book of Botany." *Designed for Colleges, Academies, and other Seminaries. In two Parts.*

Part I. *The Elements of Botanical Science.*

Part II. *The Natural Orders.*

Illustrated by a Flora of the Northern, Middle, and Western States. By Alphonso Wood, *A. M. Second Edition*, 1847.

This is a book of more than 600 pages, and from which a *Farmer* may derive much valuable information, and many facts and principles which are of the utmost importance that he should know, to enable him to direct his labors in the cultivation of the various products of the vegetable kingdom, which he has appropriated to his own use, in a skillful and intelligent manner.

1. It is important that a farmer should be able to distinguish one plant from another, or rather, should be able to identify any given plant with which he may become acquainted.

Let us suppose, for instance, that he has heard of the celebrated blue grass of Kentucky; and from the glowing descriptions of it which he has heard and seen, he becomes very anxious to procure it, in order to introduce it into his fields. He sends a hundred miles to procure a bushel of the seed, at considerable expense and trouble. He goes to work and prepares a lot of ground with extra care, in the best manner, and takes especial pains in sowing it, and waits anxiously a whole year to obtain a sight of the precious treasure; and then he finds that it is the same grass which has been spontaneously growing in every fence corner of his fields ever since they were reclaimed from the forest. But if he had been able to refer to a book on botany he would have saved himself all this trouble, by ascertaining that the *Poa pratensis*, or Kentucky blue grass, was already growing on his premises in the greatest abundance.

2. It is also important that a farmer should understand the principles of that interesting and essential feature of the vegetable kingdom—the distinction of the *sexual* character of plants—upon which depends the perpetuation of the species, and the perfection of their fruits and seeds. Many of the finest fruits of our orchards and gardens have been produced by an artificial combination of the opposite sexes of different varieties of fruit, by which a new variety has resulted, partaking of the characters of both the original fruits.

An instance of the importance of a knowledge of the sexual distinctions of plants, may be cited in the strawberry. A few of the species have both sexes contained in the same flower; but the greater number, and those most generally cultivated, have but one sex in the flowers of one plant, and the opposite sex in the flowers of another plant. In other words, some of the plants will have *male* flowers only, and others will have only *female* flowers; and unless plants of both sexes are planted near to each other, no fruit will be obtained. A bed of strawberries containing all *male* plants only, cannot be made to produce fruit under any circumstances; but a bed composed entirely of *female* plants will be barren until a sufficient number of male plants are planted with them, when they will produce fruit in great abundance. It is only quite recently that this separation of the sexes, in some varieties of the strawberry, has been established among horticulturists, and is not yet admitted by botanical writers,* although the fact has been known to the

*Dr. Darlington, in Flora Cestrica, alludes to this character of some species of the strawberry plant, but considers it the effect of cultivation, and not permanent.

scientific world since the days of Duchesne, one of the pupils of the celebrated Linnæus.

3. Another important feature in the economy of plants, and which it is not less essential that a farmer should know, is the nature of the vital functions of plants and the principles of nutrition. Many important operations of husbandry, and of horticulture, are dependent upon a knowledge of these laws. The practice of pruning and training trees may be referred to as an illustration of this fact. The quince tree tends to throw up many suckers, which greatly lessen its fruitfulness, and render the fruit small, knotty, and worthless. A neighbor had several trees, with an abundance of suckers, as represented

Fig. 1.

Fig. 2.

in the annexed figure, (Fig. 2,) and which yielded nothing. By the use of the axe and saw, he pruned them as represented in Fig. 1; since which they have yielded fine crops. (See Thomas's Fruit Culturist, p. 120.)

The functions which the leaves stems, roots, flowers, stamens, pistils, &c., exercise in the economy of vegetable life, are worthy the careful study and consideration of every person who undertakes to cultivate a living plant.

Many of the diseases of plants may be produced by the morbid action of some of the functions which these parts exercise; a thorough knowledge of which might enable us to cure and restore the plants to a healthy condition, or prevent the occurrence of the conditions by which the disease is produced. The rust in wheat is generally supposed to arise from *atmospheric* causes, and hence it is concluded, that it is not within the compass of human means to prevent its occurrence. But it is a subject well worthy of an inquiry, whether the action of the atmosphere in this case is not *secondary* and that the *original* cause exists in some derangement, or a weakly exercise, of the vital functions of some part of the plants, by which they are rendered *more susceptible* of being affected by these atmospheric agents. And if this could be established as true, then the efforts of the farmer should be directed to a more careful investigation of the qualities of the soil, and a better state of cultivation, so as to produce a more vigorous and normal condition of the growing plants, by which they might be enabled to resist or withstand the injurious effects of these atmospheric changes; and by these means he will be enabled to control, in a great degree, this ever-varying and invisible agent.—Knowledge of this kind would be of incalculable benefit to farmers.

4. A knowledge of the component elements of plants, whether organic or mineral, and of the sources from whence their food is derived, both common and specific, either from the earth or the atmosphere, is a subject of the highest importance to farmers; and many of the most learned and scientific minds are now engaged in the investigation of this branch of the vegetable economy. And it will perhaps not be many years before it will be ascertained what kind of food, and what amount must be applied for the production of the greatest amount, and that in the most perfect condition, of any given vegetable product.

5. The influence of climate, and of light and heat, and moisture, upon the growth of plants, are subjects from whence many hints may be derived, to guide the farmer to more successful operations in husbandry.

In addition to all these incitements to a study of this important science, Mr. Wood says:

"No science more effectually combines pleasure with improvement than botany. It conducts the student into the fields and forests, amid the verdure of spring and the bloom of summer—to the charming retreats of nature in her wild luxuriance, or where she patiently smiles under the improving hand of cultivation. It furnishes him with vigorous exercise, both of body and mind, which is no less salutary than agreeable; and its subjects of investigation are all such as are adapted to please the eye, refine the taste, and improve the heart."

The fourteenth chapter of the "Elements," being a review of the principles of nutrition, contains such a complete history of the whole plan of vegetation, in a very succinct and narrow compass, that I am induced to extract the greater part of it, for the benefit of the readers of the Cultivator, being persuaded that it will be interesting, if not new, to a considerable portion of your readers.

Principles of Nutrition of Plants.

"It has already been shown, in the preceding chapters, that plants consist chiefly of four simple organic elements, viz: *carbon, oxygen, hydrogen, and nitrogen.* The first mentioned exists in a larger proportion, the last in a smaller than either of the others. These four elements constitute about 94 per cent. of all vegetable matter.

"Carbon (essentially charcoal,) enters so largely into the composition of plants, that it retains the exact form and texture of the wood after the other ingredients have been expelled by heat. On this element chiefly depends their solidity and strength. Its proportion is from 40 to 60 per cent. Nitrogen, although perhaps equally essential, is less abundant in the tissues, and exists largely only in certain important vegetable products, as gluten, legumine, and albumen.

"Besides these four universal elements, many other substances, earthy and mineral, are found in quantities, greater or less, in different species. Thus, forest trees and most other inland plants contain potassa; marine plants, soda, iodine, &c.; the grasses, silex, and phosphate of lime; rhubard and sorrel, oxalate of lime; the leguminosæ, carbonate of lime. Now all these ingredients, being found in plants, are inferred to be essential elements in the food which they require for healthy vegetation; and an inquiry into the sources from which they may be supplied, constitute the chief object of *agricultural chemistry.*

"It is evident that plants do not *create* a particle of matter, and therefore do not originate in themselves any of the ingredients which compose them; consequently they must obtain them from sources without. These sources are obviously air, earth, and water. Carbon is derived from the carbonic acid which the atmosphere contains, and from the decaying vegetable matter of the soil. Oxygen is derived from the water, and from the carbonic acid of the atmosphere; hydrogen, from water and ammonia; and nitrogen, from ammonia alone, either drawn from the air or the soil.

"The atmosphere contains about one thousandth part of carbonic acid, diffused throughout the whole extent; and as this gas contains 27 per cent. of carbon, it may be demonstrated that the whole atmosphere contains at least fourteen billions of tons of solid carbon, derived from the sources mentioned in § 282—an amount fully adequate to the vast and ceaseless drain made upon it by the vegetable kingdom.

"Soil consists of two classes of materials, viz: mineral and organic. The former, called earths, consists of disintegrated and decomposed rocks—all the various mineral substances which are found to enter into the composition of plants, as potassa, soda, silica, lime, &c., all of which are more or less soluble in water. The organic materials consist of the remains of former tribes of plants and animals, mingled with the earths, which, having access to air, are decomposed, evolving carbonic acid and ammonia both to the air and water.

"Water is composed of oxygen and hydrogen, in the proportion of 8 to 1 by weight. Having pervaded the at-

mosphere in the state of vapor and rain, and percolated through the soil, it holds in solution carbonic acid, ammonia, and many of the various minerals above mentioned.

"Ammonia consists of nitrogen and hydrogen, in the proportions of 14 to 3 by weight. It arises from decaying animal and vegetable matter, as above stated, and is also generated in the atmosphere, during storms, by the flashes of the electric fluid.

"Thus it appears that the three compounds, water, carbonic acid, and ammonia, may yield to plants their four essential organic elements. And, since all of them are contained in the air, some plants are capable of subsisting on air alone; but most species are dependent on water, earth, and air, and demand a copious supply. The external circumstances, therefore, first requisite to healthy vegetation, are—

1. Free access to an atmosphere which is often agitated by winds.

2. A proper supply of rain water.

3. A soil possessing the peculiar minerals required by the species to be grown upon it, together with a certain proportion of vegetable mould.

"The first of these is everywhere abundantly supplied by nature, and asks no aid from man. The second and third are often deficient, and are to be supplied by the labors of agriculture. By *irrigation*, streams of water are turned from their natural channels to add to the scanty moisture of fields parched with drought; while, by *drainage*, the inundated bog is converted into a luxurious lawn.

"The object of *tillage* is to pulverize and *lighten* the too compact soil, and thus expose every part to the oxygen of the air in order to hasten its decomposition. The object of manuring is mainly to increase the quantity of organic matter. By various amendments, as gypsum, lime, and pulverized charcoal, ammonia is powerfully attracted from the air, and yielded again to the water. Marl promotes the decomposition of the soil, and ashes add to the potassa which exists naturally in it, being derived from the rocks which contain it, as granite, clay, slate, basalt, &c.

"Soils are often improved by lying fallow for a season, thus allowing time to form by decomposition a fresh supply of that particular ingredient which had been exhausted by previous crops. On the same principle is explained the beneficial effects of a *rotation* of such crops as require different mineral substances in their composition.

"But when all these materials have been supplied to the plant, still two other agents are requisite, without which the great work of vegetation will not go on.—These life-giving principles are *light* and *heat*, both of which emanate in floods from the sun. Under their influence the *raw material* is received into the vessels of the plant, and assimilated to its own substance—a process which can be fully comprehended only by Him whose power is adequate to carry it on.

"Under the influence of solar light, and a temperature above the freezing point, water is imbibed by the roots and raised into the tissues of the stem, dissolving, as it passes, small portions of gum or sugar previously deposited there. In this state it is crude sap; but passing on it enters the leaves, and is there subjected to the action of the *chlorophylle* (215, a,) which chiefly constitutes the apparatus of digestion. Here it is concentrated by exhalation and evaporation, sending off quantities of pure water. Meanwhile the leaves are imbibing carbonic acid, decomposing it, retaining the carbon, and returning pure oxygen to the air.

"Thus elaborated, the sap is now termed the proper juice, and consists, of course, of carbon and water, with a little nitrogen, and minute portions of the mineral substances mentioned above. From this juice are elaborated the building material of the vegetable fabric, and all its various products and secretions.

First, by the aid of light, *chlorophylle* is developed, clothing the plant in living green. Next, *lignin* is produced, the peculiar principle of tissue, whether cellular, vascular, or woody, consisting of carbon, with the exact elements of water, viz: oxygen and hydrogen.

"Meanwhile gum, starch, and sugar, nutritive products common to all plants, are also developed from the *proper juice*—not all to be immediately employed in building up the tissues, but mostly to be stored away in reserve for future use. Such deposites are made in the root of the beet, tuber of the potato, and in the fruit of almost all plants. These three products, with lignin, are all composed of carbon with the elements of water—gum and starch containing them in the same proportions.

"Among the numerous *secretions* of plants which our limits forbid us to consider, are the vegetable acids, containing more oxygen than exists in water; and the oils and resins, containing less than exists in water, or none at all. These substances vary in the different species almost to infinity, taking into their constitution, in addition to the four *organic elements*, minute portions of the mineral substances introduced by rain water. Their peculiarities of flavor, odor, color, properties, &c., although obvious to the senses, are occasioned by differences in constitution, often so slight as to elude the most delicate tests of the chemist."

I should be glad to make further extracts from this work, on the subject of vegetable physiology, which I am persuaded will be interesting as well as useful to a numerous class of the readers of the Cultivator; but the subject will require illustrations from the hands of the engraver, which would involve an expense that you will not perhaps feel willing to encounter. Should you desire it, however, I will furnish you with another extract.

Respectfully, D. L.

Mount Tabor, Jan. 6, 1849.

Experiments in Pork Making.

"How much Pork will a Bushel of Corn make?"

Friend Bateham — I was much pleased with the account of experiments, by H. L. Ellsworth, [vol. 4 p. 178,] in relation to this question, and it may be interesting to some readers of the Cultivator to see the results of some of my experiments on the same subject, although they have not been made with a view to publication, nor with the exactness of those referred to above; but they may tend more to elucidate the above question on account of having been continued from one year to another.

First of 1st month, 1845, I had four shoats, which I valued at $12,50; shortly afterwards I paid $9 for a sow and some shoats, making $21,50 for the stock. To these I fed 133 bushels of corn, which, together with the acorns and other things obtained in the woods, enabled me to butcher 2,675 lbs. of pork, and have stock hogs on the first of first month, 1846, worth $21,50, the same as above. This year's feeding made twenty pounds of pork for one bushel of corn; but there were a great many acorns, which I think improved my hogs as much as 100 bushels of corn would have done.

In 1846, I find that, after making due allowance for stock purchased, 271 bushels of corn made 2,858 lbs. of pork, equal to 10½ lbs. per bushel of corn.

In 1847, 398 bushels of corn made 4,328 lbs. of pork, equal to about 11 lbs. per bushel of corn.

In 1848, by making proper allowance for increase in the value of stock, 218 bushels of corn made 2,701 lbs. of pork, which equals 12 4-5 lbs. per bushel. This year there were some acorns.

By summing the four years together, I find that I have paid $35,86 for stock, and have stock on hand worth $26—leaving $9,86 out of pocket. I have fed 1,020 bushels of corn, and made 13,079 lbs. of pork. After taking off 329 pounds of pork to pay for the stock out of pocket, there is left 12,750 pounds of pork from the 1,020 bushels of corn, equal to 12½ pounds per bushel, as the average for four years.

In 1845, pork sold for $4 per 100 lbs.; in 1846, $2,75; in 1847, $3,25; and in 1848, $3. Suppose the price of pork averages $3, it will make corn bring 37½ cents per

bushel. But it has averaged more—about $3,25—which makes the corn bring 40 5-8 cents per bushel. The first year it brought 80 cents; the second year, 28 7-8 cents; the third year, 38 3-4 cents; the fourth year, 37 1-5 cents per bushel.

I would remark that the corn was not all measured as exactly as if it were to be sold, but considerable care was taken to have it pretty nearly correct. The hogs received the slops from the kitchen of a small family, and they had a few bushels of bran, but it was added in with the corn, at the rate of 2½ bushels of bran for one bushel of corn. They have run on the stubbles some times; but some allowance was made for the corn they would have eaten while there; and as the farm is small and poor, I have not raised much grain. The hogs have generally run in the woods. I think it is probable that a good breed of swine will average, with proper care, 12½ lbs. of pork for every bushel of corn they eat for years together, without any pasture except what they get in the woods.

Respectfully, EZRA CATTELL.

Harrison Co., 1st mo. 1849.

Another Experiment.

"HOW MUCH PORK WILL A BUSHEL OF CORN MAKE?"

MR. BATEHAM:---The following, from my memorandum book, is perhaps worth communicating by way of answer to the above.

September 4th, 1848,---58 hogs weighed and put to feed, ages chiefly from 16 to 20 months. Total weight 8120 lbs. They were fed on cut up corn, at the rate of about three hills per day till Sept. 15th, then turned on an orchard of apples until 21st, one week. From that time until Nov. 10th they were turned on corn in the field, after which, until they were disposed of, husked corn was fed as they needed it.

December 11th, eight were slaughtered, which weighed 1548 lbs nett, equal to 1935 lbs gross. Fifty were marketed Dec. 15th and weighed 154,83 lbs gross—aggregate gr. weight 17,418 lbs., from which deducting weight when put to feed, leaves a gain of 9298 lbs. Corn consumed, 850 bushels, which gives (not counting anything for the apples) 10 lbs. 15 oz. of flesh to the bushel of corn—equal to 8¾ lbs nett pork. Of course the standing corn had to be estimated, but I have done it sufficiently near the true amount for all practical purposes.

From the above data I infer that in fattening with a good breed of hogs, we may safely calculate on eight lbs of nett pork to the bushel of corn.

Yours, &c., S. L.

Kidney disease in Swine.

MR. EDITOR:---In two Nos. of last year's vol., there were given two methods of curing "kidney worms in swine." One was to place the hog on its back and tramp its bowels across the kidney. The other to "gash" the hog on the back and fill the cuts with salt. I never saw a kidney worm and cannot speak of the nature of the disease; but this last fall I had two hogs which I was satisfied were diseased in the kidney. One of them draged its hind legs one fourth of the time. The other was always able to walk, but with evident weakness in its hinder parts. They *thrived* and *fattened* as well as any that I had (about 70). After slaughtering them I examined the kidneys of each, and found in each a considerable quantity of water, and no other organic disease except what resulted from the distention of the water. The insides were taken out with such violence that I could not trace the ureters (the ducts leading from the kidney to the bladder); but there must have been an obstruction in some part of the ureter between the kidney and bladder, which retained the water in the kidney after it was secreted, and caused the symptoms above described.

In both of these cases tramping the bowels of the hog would perhaps, by breaking through the obstruction that confined the water in the kidneys, have cured the disease.

Cutting the hog on the back and filling with salt could be of no service, I presume, except in *inflammation* of the kidneys, and then it would be an appropriate remedy.

In inflammation of the kidney a hog would not thrive. In neither of the above cases was there any appearance of *gravel* in the kidney. What there may have been in the ureters I am unable to say, as they were broken up and lost in taking out the insides. Who has seen a "kidney worm" and what are they like?

D. HUGHES.

Washington County, Pa., 1849.

REMARKS.--Many well informed writers have attributed the disease called "Kidney worm" to *gravel* only. No such animal as a *worm* has ever been discovered in the kidneys within our knowledge. What then is the cause of the malady where no gravel exists?---ED.

Culture of Sweet Potatoes.

I noticed in the Cultivator of Dec. 15, several questions about the cultivation, kind, &c., of sweet potatoes. I am not acquainted with the names of the different varieties, but there was a kind of yellow ones introduced into the neighborhood of Pennsville, Morgan county, from the south, some years ago, which is preferred among us. Joseph Strahl, near Pennsville, has upwards of one hundred bushels of this kind put away for seed.

Kind of Soil best adapted for their growth.—High sandy soil is preferred; though they do well on stiff limestone soil, if worked early in the spring, so as to become completely pulverized before planting.

Mode of Sprouting.—Prepare a hot bed by setting up boards or slabs on edge, forming a square or parallelogram; fill this with fresh stable manure to the depth of 16 or 18 inches, over which place a stratum of earth, 2 or 3 inches deep, on which place the potatoes, 2 inches apart, cut in two lengthwise, the skin down; cover with oose mellow soil, two inches deep, and shelter from rain till after they are up.

Prepare the ground for planting by plowing and harrowing, then throw two furrows together, forming as big a ridge as possible; on the top of which plant the sprouts, eight or ten inches apart, and they require but little more alteration except keeping the weeds down, and occasionally raising the vines, to keep them from rooting too much.

The way to Preserve them through the Winter.—Procure boxes, fill two inches deep with *fine dry sand*, then place the potatoes all over its surface, so as not to touch each other, cover them one inch with sand, and so proceed. When full, place them, say in the kitchen, or some place where they will not freeze, but not in the cellar except it is a very dry one.

H.

Pennsville, O., 1849.

By Another Correspondent.

MR. BATEHAM:—I perceive that one of your readers calls for information relative to the sweet potatoe—the best variety, mode of sprouting the seed, preserving the roots, &c.

I consider the short, yellow kind, the best for this climate, for several reasons. It is *early*, produces well, the roots of good size, easy to dig, and of good quality.

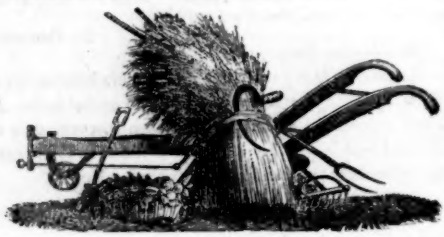
The quickest way to sprout the seed, is by the aid of *fire heat*, as follows: Dig a trench in the ground and cover it with flat stones, like a peach kiln—so that fire can be easily made underneath. Then make a bed of sandy earth on top; plant the seed, and make a slow steady fire beneath—taking care to keep the bed slightly moist. The sprouts will appear in a very short time.

My plan is, to haul a load or two of fresh stable manure from a shed where it has not been exposed to wet; throw it down on the south side of a building or wall where the ground is high and dry; then add 5 or 6 bushels of unleached ashes, and fork it over till thoroughly mixed; next pour on the pile 4 or 5 pailfuls of warm soap suds, and then put on a covering of fine rich earth

2 or 3 inches thick, and spread the tubers thinly on the surface, cover 3 inches deep with fine earth, or two inches of earth and one of *sand*.

Yours, &c., H. N. Gillet.

Quaker Bottom, Lawrence Co., O.



OHIO CULTIVATOR.

COLUMBUS, OHIO, JANUARY 15, 1849.

The Report of the Ohio State Board of Agriculture, is in course of preparation, and will probably be presented to the Legislature some time during the present month.

The Ohio Legislature has organized but done nothing as yet but quarrel. When will the people of Ohio—the *farmers* especially, learn the folly of sending a majority of mere *partisans* to Columbus as law makers?

Sheep Killed by Dogs.—As usual at this season, we hear of many instances of severe loss to sheep farmers by dogs; and some of our friends again urge the matter of asking protection by law. If we had any Legislature we should say, by all means send in your petitions, and something might be done.

Agricultural Societies.—It will be seen, by a notice in another column that an Agricultural Society has recently been formed in Fairfield county; and we are informed that the spirit manifested at the meeting and the character of the managers give full assurance of success.

In this (Franklin) county, several good farmers have recently expressed to us the desire that a society may be formed before long. We would suggest to all such that if they will ascertain how many others in their township or neighborhood, will join in the enterprise, it can soon be ascertained whether it would succeed.

The Albany Cultivator.—One of our subscribers, who thinks he can afford to take two Agricultural papers, wants to know where the Albany Cultivator is printed, and the price per year. *Albany, New York*, is the place and Luther Tucker the proprietor—just send him a dollar bill, in a letter, or ask your post master to do it, and the paper will come to you a whole year—32 pages octavo, monthly, well filled and richly worth the cost.

The Genessee Farmer, also, is a very good paper for such of our friends as desire to know more about farming operations in other States—and exceedingly cheap withal—only 50 cts per year—24 pages monthly.

Address D. D. T. Moore, Rochester, N. Y.

The American Agriculturist must not be forgotten now our hand is in, especially as it is now edited by the united talents of A. B. and R. L. Allen, both well known experienced writers on agriculture and rural economy.—Their paper deserves, and we trust receives liberal patronage. New York—$1 per year—32 pages monthly.

Canfield's Work on Sheep.—A subscriber inquires of us, whether Canfield's new work on Sheep husbandry is for sale at the Book Stores, and its price. We cannot answer with certainty, but we think it is for sale at Book Stores in the Northern part of the State, and the price we believe, is $1.

P. S. Since the above was in type we have received a letter from Mr. Canfield with the advertisement contained in this paper. He has been prevented by sickness from distributing the work to booksellers.

The Weather in these parts has been quite cold the past two weeks, and most of the time very clear and pleasant—no snow to speak of—Rain 13th.

The Cholera has disappeared from New York, also from Cincinnati, since the severe cold weather and very much abated in New Orleans, at the latest accounts.

"Best Drove of Cattle in the World!"—Under this imposing caption the Chicago Democret speaks of a drove of grass fed cattle, recently purchased in that city, numbering 1,200 head, which averaged 677 pounds per head, and says:

"We doubt whether there was ever so large a drove of grass fed cattle driven to any market that would average so high. Mr. Funk received nearly $30,000 for the drove, which he took to McLean county. The beef was cured and packed in Mr. Dyer's best method, and will be sent east to contribute still further to the high reputation of Chicago beef."

Our Buckey drovers could easily beat this story in the matter of weight and value per head, if not in number.—They do not find it good economy to put so many in one drove.

Fairfield Co. Agricultural Society.

At a meeting held, pursuant to public notice, at the Court House in Lancaster, on the 23d of December, 1848, to take into consideration the formation of a county Agricultural Society, it was "*resolved* that it is expedient to form such society," and a committee was accordingly appointed to draft a constitution, and nominate officers.

Addresses were made, during the absence of the committee, by D. Tallmadge, Wm. Cox and M. Z. Kreider.

A constitution was reported and adopted, and the following officers were appointed for the ensuing year:

D. Tallmadge, *President*,

(and one *Vice President* from each township.)

Henry Miers, *Treasurer*.

John M. Bigelow, *Secretary*.

Forty-one persons were enrolled as members.

Domestic Animals must be well attended to at this season—sheltered in stormy weather and regularly fed and watered. Less food is required to keep an animal in

good condition when sheltered, than when exposed to severe cold; hence economy as well as humanity is in favor of shelter.

Husking Corn.

The Buckeye Boys Ahead.

Ed. O. Cultivator.—I notice in your paper of Jan 1, an extract from the Massachusetts Plowman, stating that *good laborers* in Massachusetts harvest *ten bushels* of corn per day, for a week at a time, by working some in the evenings. Our boys here had a hearty laugh over that paragraph, and concluded the editor was drawing the long bow string pretty *taut* on his readers for their laziness! They said that if they adopted his rule as a day's work, they would have to go to bed without their supper.

That southern man's huskers did pretty well, [fifty bushels a day,] where the sun shines as hot as in Tennessee—but they should not throw the corn on the ground in the mud and dirt; they should have a wagon with them, and throw the corn in it. At least twenty-five per cent. damage is done the corn by throwing it on the ground.

Our method of harvesting corn in the Little Miami valley—and we have no small quantity of it—is to take the wagon in the field with the hands, and husk and throw in till it is full, then away to the crib to unload, while the huskers fill a second wagon. In this way we crib from 50 to 60 bushels per day per hand, including the teamsters—not as *brag* days' works, but the ordinary average. I would further say, that tieing the husking peg to the wrist is here regarded as belonging to the times when our forefathers put a stone in one end of the bag to balance the grist when going to mill.

We do not think anything less than one hundred bushels a big day's work, to husk and throw on the ground. This some may think a large day's work, and so it is; but it is no uncommon thing for our best huskers to husk 120 to 130 bushels in a day, when they try what they can do; and we have had even more than that done. This, too, was not guess work, but actual measurement, at the rate of three half bushels of ears to one bushel of corn, which rule will hold out with our corn.

A Buckeye.

Little Miami Valley, Jan. 1849.

Remarks.—The foregoing is from one of our best and most extensive farmers, and whose statements may be implicitly relied on; but we don't expect the Editor of the Mass. Plowman to believe him until after he has visited the Ohio valleys, or some other region where they *grow corn.* If he will come to the Ohio State Agricultural Fair, next September, we will promise to convince him that 170 bushels of corn may be raised on an acre in this State, and that one man can husk 100 bushels in a day. Will Bro. Buckminster accept?—Ed. O. Cult.

Plowing in or Burning Corn Stalks.

Mr. Bateham:—There is one practice among farmers at the West which I regret to see, and hope a substitute will be found. I allude to the practice of breaking down then raking and burning corn stalks in the spring, "to get them out of the way."

The ground under the corn stalk winrows may be benefitted by the ashes, but the general field is most certainly impoverished by the loss of that which should be allowed to decompose upon or beneath its surface.

Some landlords require their tenants to plow in the stalks, but ordinarily this is a somewhat difficult operation. I have heard that in the south west portion of Ohio, the farmers use a large roller with knives—so constructed that it breaks down and cuts to pieces the stalks (at one operation) so that they can be easily turned under by an ordinary plow.

Will you have the goodness to inform me where I can obtain a pattern or description of such machine; or, if you do not possess the information, please make the inquiry through your excellent paper.

Respectfully your's, &c.,

H. L. Ellsworth.

Lafayette Indiana, Jan., 1849.

Remarks.—We have no knowledge of such an implement as the one referred to above, being in use in this State, or elsewhere. If any of our readers have, they will please inform us. We think such a roller might be constructed without difficulty, to work on prairie and bottom lands where no stones are found.—Ed.

HORTICULTURAL DEPARTMENT.

Report of the Ohio Fruit Convention—*Second Session,* (1848.) This work has been distributed to subscribers, and copies can be had at the office of this paper, price 25 cts.; six copies for $1. It is a neat pamphlet of 64 pages, and contains a large amount of information in regard to fruits, of the utmost importance to fruit growers and nursery men, especially of Ohio and the West—such as the comparative value of varieties, their different names, adaptation to soils and climate, cultivation, diseases, &c.. &c.

Note.—The Secretaries desire to say that owing to the hasty manner in which most of the notes of remarks, made in convention were taken, it is probable that members will discover some mistakes in the printed report.—The minutes were written out by Mr. Elliott; and the printing and proof reading done under the supervision of Mr. Bateham. Both have endeavored to avoid error, but it is not likely they have entirely succeeded, owing to want of sufficient time, and other circumstances.

A Good Move.---At the meeting of the Cincinnati Horticultural Society, on the 6th inst., a committee consisting of the President, Corresponding Secretary and Mr Ernst, was appointed to take measures for uniting with other Societies in a petition to Congress for such a modification of the Post Office law, as will permit the transmission, by mail, of seeds, grafts, and other horticultural objects, when in packages of not more than two ounces weight, at newspaper postage, instead of letter postage, to which they are now subject.

On Pruning Trees and Grape Vines.—We invite the attention of our horticultural readers to the suggestions of our friend Lapham, on the subject of pruning grape vines. If the deductions he makes from Prof. Lindey's theory are correct, it is a matter of much practical importance, for it will apply to fruit trees as well as to grape vines, and it ought to be generally understood by fruit growers and horticultural writers. We have some doubts, however, whether facts will fully sustain this theory; and hence we invite observation and experiment.

A List of Fruits for Ohio.

In the opinion of the writer, it is much to be regretted that the Ohio State Board of Agriculture at its late annual meeting passed a resolution authorizing the publica-

tion of a list of fruits worthy of recommendation for general cultivation in this State.

First.—This matter was gradually—and indeed as rapidly as can safely be done—being perfected through the proceedings of the Ohio State Fruit Conventions and State Fruit Committee's reports. And it is a query whether, as these Fruit Conventions and Committees are so nearly allied to the Agricultural interests, the State Board should not rather have moved to expend a portion of that allowed them for general good use, in causing an extra number of these reports to be printed and bound along with their annual report. Thereby aiding in the continuance of such Conventions and also giving those who get their report, a copy of the opinions of many men upon all our leading fruits, instead of, as now, giving a mere recommendation of one or three men.

Second.---At this particular time, there is not a man in Ohio capable of making out a list of the different varieties of fruits that will be certain of value five years hence, and simply from the fact, that the past three or four years have had so much attention drawn to the subject and so many new varieties introduced, favorable to further notice, both at home and from abroad, and such varieties being of course all untested as to value in bearing, keeping, &c., &c., as compared with those we have known for years, no decisions can be given.

As an instance, in giving a list of Pears, while by almost every grower east the "Fondante D'Antoinne" is awarded the first preference, trees of it have not fruited as yet in Ohio sufficient to warrant an opinion. Or, again, while the Flemish Beauty takes high rank by Eastern growers, a false variety was first introduced and for years, and perhaps may yet be, disseminated. The false one being only a third rate pear when grown side by side or on the same tree with the true. Who shall say then, that the Flemish Beauty is worthless in our soil, and feel certain he utters that which he cannot be induced to retract? Or again, take the R. J. Ewing, and while it is now regarded as valueless in some sections, and where but a few years since it was of the best—who can say but that application of special manure suited to the requirements of the variety, to perfect its fruit, may induce an entire different verdict within three years?

Thus in fact we might go on, with numbers, but perhaps sufficient has been written to cause more thought upon the subject before the requirements of that resolution by the State Bard, are acted upon.

Pomologist.

Ohio, December, 1848.

On the Culture of Grapes--Pruning, &c.

Mr. Bateham:—On page 76 of vol. 2, you express the opinion that the vineyard method of close pruning of the grape vine, in garden culture, is preferable to that of training them on a trellis, with comparatively slight pruning.

Now, as this is contrary to my practice and experience, I shall endeavor to give you the reasons for the faith that is in me.*

It is well known that grape vines require for their proper growth, a rich, warm and *dry* soil; and vine dressers are frequently obliged to incur a great expense in preparing their grounds for a vineyard, by under draining, and deepening the soil, to prevent an accumulation of water around the roots of the vines. This practice would indicate that the effects of moisture upon the growth of the *grape vine* are well understood. The common practice of short pruning and trimming the grape vines, however, would indicate that the injurious effects of moisture upon the maturation of the fruit, are not so well known. The usual mode of pruning and trimming in the vineyard culture, consists in cutting the stems short and training them to upright stakes five or six feet in height, so as to produce the fruit at the distance of three to six feet from the base of the stem.

By reference to works on horticulture it will be found that "the office of the *stem* is to convey the crude fluid obtained by the roots from the soil and called *sap*, into the leaves for elaboration, and then to receive it back again. As soon as the sap enters the stem, it dissolves the vegetable mucilage it finds there, and becomes denser than it was before; it is further changed by the decomposition of a part of its water, acquires a saccharine character, and rising upwards through the alburnum, takes up any soluble matter it passes through. Its specific gravity keeps thus increasing till it reaches the summit of the branches, and, by degrees it is all distributed among the leaves. In the leaves it is altered and then returned into the stem."—(Lindley's Principles of Hort. S. 56.) It may be seen further, that it is to the action of the leaves, influenced by the light and heat of the sun, that the formation of the peculiar secretions of plants of whatever kind, is owing. It would follow, therefore, that the greater the distance the sap has to traverse in its passage through the stems of plants, and the greater the number of leaves, the richer it will become of all those organizable matters which go to the formation of both wood and fruit. And as a consequence *the longer the stems of vines are trained before the fruit is allowed to set, the larger and more highly flavored will be the fruit.* The celebrated Mr. Knight made several experiments with a view to test this principle,* and he found that with grapes their size and flavor were in proportion to their distance from the base of the stem. Mr. C. W. Elliott, on page 142, vol. 4, of the Western Farmer and Gardner, says, of the Ohio and Lenoir grapes: "They both succeed best with the *long pruning*, and should be left in the spring with but few bearing branches, or as it is termed, laid thin."

Numerous other examples and experiments might be cited to sustain this view.

Mr. Williams of Pitmaston, says: "I have gradually trained bearing branches of a small Black Cluster Grape, to the distance of near fifty feet from the root, and I find the [bunches] every year grow larger, and ripen earlier, as the shoots continue to advance. According to Mr. Knight's theory of the circulation of the sap, the ascending sap must necessarily become enriched by the nutricious particles it meets with in its progress through the stems of the alburnum; the wood at the top of tall trees, therefore, becomes short-jointed and full of blossom buds, and the fruit there situated attains its greatest perfection. Hence we find pine and fir trees loaded with the finest cones on the top boughs; the largest acorns grow on the terminal branches of the oak, and the finest mast on the high boughs of the beech and chestnut; so likewise apples, pears, cherries, &c., are always best flavored from the top of the tree."

"The merit of the Fontainbleau mode of training the vine, in which many of the stems are carried to very considerable distances, seems to depend in some measure upon this principle; and there is a well known Black Hamburgh Grape at Bath, the stem of which, owing to local circumstances, is necessarily conveyed to a very considerable distance before it is allowed to produce its bearing branches, the quality of whose fruit is of very unusual excellence."—(Lindley's Hort. pp 149—151.)

Such has invariably been the result of my own observation and practice. And I presume all who are acquainted with the grape culture have observed the same thing.

In seasons of excessive moisture and especially on vines trimmed short, the sap will be poor and meagre, both from the great quantity of water which it contains, but likewise from the short distance it has to traverse through the stem, it cannot receive that degree of preparation from the action of light and heat required, and consequently the fruit will be small, imperfect and ill-flavored. In a humid atmosphere the perspiration of the plant is lessened, and of course the sap is therefore more watery. It is the opinion of Mr. Knight that the leaves, when the atmosphere is moist, and the ground not saturated, will absorb moisture, and cause a descent of the sap through the alburnum, producing such a derangement of function as to cause mildew and various other species of blight.

* I have forgotten where or in what work I saw the account.—Will some one refer me to it?

I am well satisfied that much of the ill success in the cultivation of the hardy grapes may be attributed to an erroneous mode of planting and subsequent training and management. In the vineyard culture as practised near Cincinnati, and copied from the foreign mode of culture, I am convinced that vines are planted too close together. The roots of the vine are very slender, and extend to considerable length, in deep rich soils, and as the food is taken up by the spongioles at the extremities of the fibres, the roots soon interlock each other and the whole ground becomes filled with a mass of roots which soon exhaust the soil of the food demanded by the great quantity of vines on so limited a space of ground. Mr. Downing says: "The vine soon exhausts the soil within its reach, and ceases bearing well when that is the case; and recommends a heavy top dressing of manure every third year. This exhaustion of the soil combined with short pruning may be the chief cause of the rot and mildew, owing to the meagre and watery sap from which the fruit is elaborated under such circumstances. This view is much strengthened by the following experiments given in the Horticulturist of August, 1848:

"In the month of June, (latter part) 1846, at the time I made the summer pruning of the vines, I opened shallow trenches, say four or five inches deep at the roots of the vines to be pruned. As fast as the pruning was finished, the leaves and young stems cut off were laid in these trenches, sprinkled with sufficient gypsum or plaster to whiten the foliage (from a pint to a quart per plant) and the whole trodden down and buried in the trench.—As soon as the leaves fell in the autumn, I repeated the process,—raking up the leaves and burning them around the roots of the vines, after dusting them over with plaster as before. In June, 1848, the present season, I repeated the same operation at the summer pruning."

"Now the result is as follows: Although the season is remarkable for the prevalence of the rot, not a berry on any of these *six vines*, so treated, is affected; the crop being on the contrary very good,—the fruit large, and increasing in size. The vines, too, are remarkably healthy and vigorous."

"On the other hand, the remaining vines, fourteen in number, are *every one* affected with the rot---some of them very badly; and even on those least affected, ten per cent of the berries are destroyed by this disease."

"I ought to add that the vines of my neighbors generally, are much affected by the rot this season, and that I have seen no Isabellas or Catawbas this season that surpass in appearance those on the six vines alluded to."

It seems to me that these 20 vines had exhausted the soil of the supply of food peculiar to the vine, and could not perfect sound fruit; that as soon as the six vines were *fed*, the fruit became sound, the wood healthy and vigorous; and those *not fed*, still produced diseased fruit.—These vines were trained on upright trellises.

In the culture of grapes for the table, the following is the method I have pursued for several years.

I trim the vines in winter, and it had better be done early in December, so that the sap which the roots absorb during the winter, may deposit its cargo of elements of the future wood and fruit in the remaining branches; as it is obvious that the sap which the vines contain, that are trimmed off in the latter part of winter, is thrown away and lost, by trimming in the fall, a large portion of this winter sap is saved, by the remaining branches receiving that which would otherwise have been lost. I do not shorten the main stem, and a few of the principal branches, but encourage their extension in length indefinitely; and cut back the lateral shoots, each year, to one or two buds, for the bearing wood. I trim liberally---leaving but little on the trellis but bare poles. Most people trim too little, thinking they will have no wood left to bear fruit. This is an error. Trim so as to throw all the vigor of the vine into a small quantity of long wood, and there will be plenty of new wood formed to bear fruit.---I take out all the lateral, or auxillary shoots, that I do not wish to leave, as soon as they appear, during the summer.

It is a bad plan to strip off the leaves, or to shorten the vine, as some do, beyond the bunches of fruit. It is the leaves situated beyond, or above the fruit, that elaborate the sap, and prepare it to produce fruit.

By this system of long training, the disposition of the vine to run all to wood, or its "rampant growth," will be checked, and the sap is better fitted for the formation of fruit buds and fruit. An objection has been urged against long training, that the vines will bear only at the extremities of the branches;* but it must be recollected, that the vine may be allowed to divide into several branches after it has been trained into a single stem for a considerable distance, and will bear as much fruit as one vine will produce by the short method, and that of a much finer quality.

It will be observed that in a state of nature, the grape vine extends itself to the tops of the loftiest trees of the forest, before it bears fruit or divides into branches. And many instances might be cited of the cultivated varieties, when allowed to grow in their natural manner, by running over trees, have produced abundant crops of very fine fruit.

When I am pruning, and tying up the vines, I strip them of all the loose bark to allow the sun to have its full effect upon the stems† in promoting the transportation of sap, which condenses in its progress upward, by the evaporation of the water it contains; § and, likewise, the heat of the sun produces or rather promotes the deposition of the new organizable matter in its descent from the leaves towards the roots. The bunches of grapes growing at the greatest distance from the root, are always the largest, ripen the earliest, and are the best flavored of any produced on the same vine. D. L.

Mount Tabor, December 27, 1848.

REMARK—We said we thought the vineyard method "would be found the most *profitable*"—and we think so still, taking into the account the greater expense and labor of training vines on long trellisses, and the less *quantity* of fruit obtained from a given space of ground by this method. We confess, however, that we did not take into consideration the *quality* of the fruit, which we believe is generally finer on long vines than short ones, as is contended by our friend L.—ED.

* "We admire" say Messrs. Poiteau and Vilmorin, "those branches of the vine which are carried to two hundred feet in length; but we recollect that when a branch has extended beyond a certain distance it no longer gives fine *fruit but at its extremities*. The spurs of the centre gradually die of inanition."—Kenrick's Am. Orch., p. 224.) This objection is made in France, where, from the high price of land, *space* becomes important.

† The influence of the sun on the movement of the sap in the stems of trees, is well known to those who make sugar from the maple. More sap is obtained by tapping the trees on the sides exposed to the sun.

§ "Sap also differs in its specific gravity according to the distance from the root at which it is taken, the gravity increasing with the distance, arising apparently in some degree from the solution of deposited matter in its progress, but perhaps more from the transpiration of the plant, throwing off a large proportion of the watery part of the matter taken up from the soil."—(See Natta'l's Introduction to Botany, page 242.)

Letter from H. N. Gillett.

Color of Fruits as affected by climate—Fruit culture in Southern Ohio.

Quaker Bottom, Lawrence, co., O., Jan., 1849.

FRIEND BATEHAM:—As the hurry of business is now over, and evenings long, I feel like having a little chat with my old friends through the Cultivator. * * *

Please put me down for one dollar towards paying the expense of publishing the Report of the Fruit convention, and send me copies when ready.

I am much pleased with the arrangement for holding the next fruit convention in Cincinnati, and I will take the responsibility thus far in advance of promising that Lawrence county will be well represented on that occasion.

I also flatter myself that the river counties generally, will be on hand with fine specimens of fruit, especially apples.

In regard to the great difference in color, spoken of by Dr. Barker, between the apples of northern Ohio and southern, and which he thinks is attributable to the climate alone, I would remark that in my opinion this difference arises mainly from another cause, namely: *Southern taste or fancy* The man who plants an orchard of green, gray or grizzly apples with a view to supplying a southern market, must be as verdant as a late gourd.—Apples with a brilliant red surface, other things being equal, will command 50 to 100 per cent more in a southern market, than such as have a green, gray or white skin.

It is a fact, however, that climate has some influence on color—not perhaps in the production of a greater proportionate number of red sorts in a warm than a cool climate, but in bringing the fruit to greater perfection of color as well as size and flavor. Hence our apples in southern Ohio attain greater size, superior flavor and redder color, than is common with the same sorts in cooler climates. They were redder the past year than usual, the summer being longer and warmer.

In the Cultivator of Dec., 15th I notice some interesting remarks on fruits, &c., by an amateur cultivator, of Burlington, in this county. As the author of that communication is a particular friend of mine, and of a profession which renders him accustomed to having his sayings closely scrutinized, I trust he will not complain if I criticise a little, with due deference to his intelligence and integrity.

I do not think the gentleman meant to be understood as asserting that we are too far south to grow the best of winter apples—but only that we are too far south for many of the *northern kinds*, as the R. Island Greening, Baldwin, Bellflower, &c.

In regard to his opinion about the currant and gooseberry, I hope to be able to convince him by actual demonstration, that he is mistaken.

His remarks on other kinds of fruits correspond with my own observations. I have full faith, however, that the *grape* will succeed admirably with us, when protected from wet weather. I have found during several years that branches of a vine which run under the roof of a shed produced fine crops of fruit, while on branches on an open trellis the crops failed entirely. The vines should be trained on a wall, and shedded with a broad plank.

Gooseberries should be planted in a fence row and the branches trained through to the east or south east side.

Respectfully, H. N. Gillett.

Fruit Conventions.--Their Comparative Public Benefit.

It is not our purpose here, to speak of motives expressed or apparent, of public or private interest; of a love of public good or private emulation, that may have influenced those who acted in the formation, or calling of Fruit Conventions. Our theme at this time is as to what may have thus far apparently been the advantage to the public of the different fruit Conventions held in the States within the past few years.

If we except Maine, Ohio may justly claim to have been the first State in which has ever assembled at one point, extensive fruit growers and nurserymen to collect and disseminate information as to local and incorrect names, and the value of varieties as tested in various sections and soils.

Of what was done in Maine at her State Convention, we know little, not having ever seen a full report of doings of members there convened. Much was undoubtedly performed, but some machinery was lacking or we should again have had report of a similar assemblage.

The Convention of Ohio Fruit Growers, in 1847, being the first of the kind ever held "west of the mountains" it was not expected by its most sanguine friends to accomplish much of immediate benefit, but hopes were entertained at least by the writer, that it would lay the foundation to such a rule and establishment, that within two or three years it would be of such evident public benefit, that the State would give her aid toward paying all expenses necessary to such annual assemblage; and have the report thereof published, and sent out among the public free of charge.

The second Convention, 1848, is evidence that the first found favor and that it will be perpetuated. The general Convention of Fruit Growers, etc., called by the N. Y. State Agricultural Society, to be held at Buffalo, was in a measure, a matter of experiment in the minds of some; but the officers of that society, aided by many zealous horticulturists of Buffalo, were of opinion that the time had arrived when the State Society should foster the fruit department upon a more extended and liberal manner than heretofore. This Convention, therefore, was to show whether they judged correctly or otherwise, and if the former, that then and there would be the time to make arrangements for its continuance, annually. Accordingly during its session, a committee was appointed and the subject taken into consideration. Said committee were instructed to report when and where another convention should assemble; how it should be called, and what should be the rules adopted for its guidance. The report of that committee embraced only a part of their duties; members thinking it best to see whether the convention would accept the first part of their report; as if not, the second would not be required. Their report then was, that a second Convention be held next year, the time to be fixed by the N. Y. S. Society, and the call issued by that Society's Secretary. The rules for guidance not being necessary at that time, and not being then called for by the convention assembled, the committee undoubtedly were glad to be relieved of for a time. They, it is presumed, will issue this part of their duty through the Secretary of the N. Y. S. Society, the time when, of course is unknown to the writer—but should judge their State Committees, &c., would be required to be made out and published previous to the coming return of fruit season.

With this convention nearly all Western and some portion of Eastern men joined; but about or shortly after the time of this convention's call being issued, another appeared for a general convention at New York.

The New York convention had for its backers several respectable Horticultural Societies and while it was evident the two would not intermingle, yet it was hoped and expected that from the well known talent and advantages of its friends, as well as coming after the Buffalo convention, it would result in the most of general information; and of this point, having now shown somewhat of mode of each convention's being called, without touching upon the inducements or notions of individuals in their acts and sayings for or against, we will commence first with the Ohio Convention.

The mode of business in this convention, was, for each member to speak his views in short, comprehensive terms, of the value and name of each fruit brought before the convention for discussion. These views were recorded and thus individually given in the report of the Secretaries. By this mode it was, four members having the specimens of fruits under discussion immediately before them, rendered certain they were all talking of the same fruit, and its value, grown in different sections and soils of the State recorded; and the value of such record depending each and severally upon the person who uttered it, and to be judged of weight, according as his judgment in such matters is esteemed.

The principal well known, established fruits having nearly all been discussed, the record gives to the peruser who desires to make a selection for any particular soil or section in Ohio, a certain knowledge of the value of such fruit as compared with other well known varieties in his section. The Buffalo convention adopted a similar plan, but more complicated, and causing a vote to be cast upon each fruit brought up for discussion, as 1st 2d or 3rd vote. These votes or decisions as they may be termed, were frequently made by a bare majority, and occasionally by a little apparent packing—inasmuch as gentlemen, seeing another strenuous to have a particular fruit re-

ceive vote as first rate, and not truly thinking of the permanency or weight of such vote recorded, and also with a wish so to proceed as not to offend any, they would stand back and let the matter pass –occasionally, however, by recording an objection. These objections, however, have rarely been noticed; the reader, and indeed the spectator at the time, taking thought only of the result.

That some varieties were hastily condemned and others praised as hastily, has been so evident that much of the weight or value to be attached to such records has been lost—and yet the general publication of that Convention's proceedings by pamphlet as well as transferred to a host of newspapers, has evidently done much to awaken attention, to say the least, upon the subject. The course of the New York Convention was one of a different line from the two named. There a committe composed of but a small portion of the convention, placed in a room by themselves to make up a list of fruits to recommend to public cultivation generally.

This, by the way, we gather from the newspapers and other journals, as no regular report of the convention has been issued up to this present time. That the committee so appointed, were talented men, does not admit a doubt; but that they looked beyond their own individual experience, does admit of some doubts—at least to western men, as they recommended in their list of fruits worthy of general culture, some varieties that are well known not to succeed at the west. What other valued act they performed has not yet been made public. The establishment of State fruit committees, from the result of whose reports they boast of much advantage to be obtained, appears to any who have even acted where such reports were desired and called for without response, as bearing somewhat of verdancy in supposing there can many men be found willing to make especial note of fruits throughout the season and write out such report without some reward other than to be laughed at and criticised for his errors. And again, although it is matter at this moment of little note—query, whether those best capable of judging of fruits are identified with these committees.

Thus, then in summing up, it is apparent the Ohio Convention's course has been one of value—but only as within her own limits, for which it was designed. The Buffalo Convention in following nearly the same course, and making her proceedings extensively known—being also composed of a much larger body of men, and those longer acquainted with fruits, caused more attention to the subject and therefore more value. The N. Y. Convention in pursuing another line of action, left a point at which envious feelings could well be directed, were any such created, and as yet, have issued nothing to the world which could not have been found in the pomological works of the past twenty years.

Ohio, Dec., 1848. POMOLOGIST.

Washington Co., vs. Morgan Co. Apples.

We published some time ago, part of an article from the Morgan County Chronicle, written by Dr. Barker, claiming the superiority of Morgan county apples over those of Washington county. In a late number of the Marietta Intelligencer, some person gives the Dr. a 'lick back' as follows:

It would seem by the statement in the Chronicle, that a contest for the superiority in fine fruit, (more especially apples,) has lately taken place between the counties of Morgan and Washington, or perhaps only Marietta; and that Morgan has come out of the contest victorious, and is now going on conquering and to conquer.

All of this may be true; but please, Mr. Editor, inform us when and where this "contest" for excellence in fruit came off, and who were the pomological marshals at that trial for superiority of Pearmains, Pippins, and Pumpkin Sweetings, at which Marietta, or any other township of Washington county "acknowledge beat."

The editor of the Chronicle, it is well known, has recently been cutting a scion from some of the best stock of Washington County, but it was not to have been expected that young shoots would so soon have shouted victory over the parent tree:

If Morgan county exported and prepared for export 24,000 bbls. of Apples the present year, then indeed it is even with Washington county, but not in advance.

Yours, MARIETTA RUSSETT.

On Horticulture—Asparagus.

It may be said that writers should endeavor to adapt their subjects to the season at which they write; and such would perhaps be correct were one expected to write weekly or monthly; but a person disposed to furnish somewhat of his experience, theory or suggestions gratis, for public reading, must always be allowed to take his own time for the writing.

With this view, while it would perhaps be more in keeping to treat of grafts and grafting, repairing tools, etc., etc , as appropriated to the occupation of winter season, I will, with your leave good reader, consider you *au fait* in that line and devote my short communication to a subject which should make always an interesting one to the farmer or men of small gardens,—I refer to that of

ASPARAGUS.

A vegetable of which every one is fond when well cooked, and yet which is rarely to be met with in the gardens of most people in the country. The impression which has prevailed that it requires three years to nurse and care for a bed ere any can be cut, is foreign to the tastes of western men, who, as a general thing, desire a quick return for any outlay of capital or labor.

The following simple method of forming Asparagus beds, taken from a little work entitled "Every Man his own Gardner" will be found suited to the circumstances of every man, and far preferable to the old plan of planting three year old roots.

"If for a small garden, or upon a large scale, choose good ground; let it be well manured, spaded, or plowed and harrowed; the beds laid out three feet wide, and two feet of footway between; draw the earth off both ways, four inches deep, from all of the beds; then open the drills in the centre alone, then bed the others a foot apart, three inches deep. Early in the spring, drop the seeds in, two nearly together, about a foot apart; cover all over. You may cultivate a crop of Salad, Radishes, or Cabbages in the foot way. Hoe and keep clean through the summer; in autumn cover the beds all over with longish manure from the horse stable, about three inches thick; then with a spade or plow, if you have a large plantation, make two smallish furrows in the foot space and throw the earth on to the beds, so that the top of the plants may be about six inches under ground. When the spring opens fork the beds up. The Asparagus will be large enough to cut the second spring, if your ground is good. Showing a clear saving of two years in time, the expense of plants, planting &c. A bed made in this way will last twenty years"—care being taken to apply annually a good dressing af manure and a liberal supply of salt.

A little attention should be given at this time by every orchardist in examining the bark of his trees. Occasionally where a tree has grown too rapidly and late in the season, the bark upon the south side will be found slightly cracked or burst; it should be immediately coated with about one inch thick of cow manure and clay mixed, and bound up with a strong cloth or mat.

The application of wood ashes has been found beneficial to all kinds of fruit trees, the plum and pear require most; do not fear to apply from one to five bushels to a tree according to its size.

Cleveland, O. R. F. ELLIOTT.

☞ Our friends around Cleveland will find Osage Orange Seed at the Seed Store of J. Stair & Son—same price and quantity as at this office. Jas. Johnson at Wooster also has it on hand.

HOUSEWIFE'S DEPARTMENT.

Letters to Housekeepers -- No. 4.

Dear Sisters: — I rose at four o'clock on New Year's morning to wish you a happy New Year, and many blessings to the precious ones around you; but I was too late. The printers had done their work in advance, so as to enjoy the customary holyday; and my greetings must of course come behind the time.

I trust that you and yours have spent the holydays happily, and again resume the sober every-day toils and joys of life, better, as well as happier, for having gaily parted with the old year, and cordially welcomed the new. These festival seasons, though looked coldly upon by our Puritanic ancestors, are nevertheless of deep importance in making up the sum of human happiness. Life would have too many pages of prose with scarcely a "Poet's Corner," if these joyous festivities were driven out of doors by all-calculating Profit. Strange, is it not, that we so love to live for mere dollars and cents, instead of regarding them only as our servants, made for the simple end of promoting human weal, not to be perverted into weal itself?

I trust this New Year has been improved, as all such occasions should be, to develop the social character in its highest and purest aspect. While the social banquet has been spread, and friends and neighbors have met to interchange the compliments of the season, the links in the chain of universal brotherhood have been burnished, old wrongs forgotten, or at least remembered only to praise Heaven that we too may know how to exercise the greatest of all moral perfections, forgiving love; while new schemes of benevolence, and new aspirations for universal good, have taken possession of our hearts. May you and yours rejoice in this and all other New Years, as a new field for human enterprize—another starting point from whence you may recommence life's journey, renew its pledges of good, and erase every blot of misdirected passion.

New social arrangements are happily commenced with the commencement of the year. Though it would be unwise to delay any intended improvement, merely for the sake of commencing with the year, still, when all has been rightly arranged, it is pleasant to commence at a point so marked that we can easily revert to it in calculating our progress.

In looking back to holydays that thus constitute some important era, they become landmarks by which we can easily retrace life's journeyings—consecrated monuments like the altars erected by the children of Israel in their wanderings, which, when we meet them, declare to us—Here was dealt to mortals celestial manna, and here the swelling Jordan rolled back that we might pass in safety.

True, the grave of the old year may have swallowed up our dearest earthly hopes, the snows of winter may fall upon the lowly bed of the beloved, and sorrow throw its pall of gloom over the prospect of the future, still the new year, with its promised resurrection of buried flowers and decayed verdure, points with a cheerful hope to the renewal of our own decaying natures, and pledges a fadeless spring beyond the tomb. Hope, then, rather than sorrow, should inspire even the stricken, while to the young and buoyant it should, at each New Year, shout, "onward to the goal."

Pardon my moralizing mood. I have not forgotten that I was to talk mainly of your social winter evenings, nor that I left you with some half finished remarks about the incapacity of children to understand all the hard words that wise people use in writing, and the little folks encounter in reading.

I have often thought that we were too apt to regard language in its most elaborate forms as a direct gift to the human race, and instead of pitying and instructing the ignorance of the young, to treat it with impatience, and sometimes, I fear, with ridicule. The vocabulary of a child, from six to ten years of age, is ordinarily both scanty and simple, and no pains should be spared to enlarge it daily. When the evening lesson has been read, it is of great service to the mind to call upon the reader to rehearse it in his own language. By this method you will see the actual ideas received, and discover how far the true sentiment has been veiled to the child's mind by the use of some unfamiliar word.

Another most excellent practice is to take a few sheets of paper, and fold them into a neat little book, in which some one of the family is daily to write a word, with its definition, for each one to commit through the day. It is a very small amount, but it will lead to astonishing results. Let some of your little arithmeticians figure out what number of words might be acquired in this way, if he were to commence at the age of five years, and continue it till he is fifty. Just think of it, 16,425 words. What a vast vocabulary compared with the amount possessed by most persons. It is by little daily additions that we increase in stature from childhood to maturity; and the great masses formed by slow yet constant accretions like the coral reefs of the ocean, prove the *power of little* when multiplied by the *ratio* of constancy.

Another excellent, as well as amusing exercise, consists in taking a radical word and tracing out its relations—first, its immediate kindred, and then all its uncles and cousins. Little ones will soon acquire a tact that will astonish you, and by this means will perhaps form habits of investigation that will lead them to become eminent scholars. Take, for example, the word *able*. Give its primitive meaning; now add to it the prefix *un*, and it becomes *unable;* add *dis*, and it become *disable;* remove the prefix, and change its form slightly, and you have *ability*. So go on, and make it a kind of game to hunt up all its relations. This will not only fix the meaning of the primitive, but give an acquaintance with all its derivations, and thus become a profitable amusement for the whole family till the children have exhausted their hour, and are ready to give the good night kiss, and leave a quiet hearth for the older ones.

A little courage, sisters, and this part of the scheme may be in successful operation, completely driving away all that would render the first hour of the evening a half discordant bustle.

Before closing, allow me to thank those who have spoken a word of kindly encouragement in behalf of these feeble efforts. We have as yet done less to make home a blessing than we ought. May we have grace given us for the future, that our influence may neither be thrown away idly, nor perverted. In our next, we will try to say something in regard to domestics, as sharers of the social circle. Adieu.

Maria.

Franklin Co., Jan. 1849.

Inquiry about Churning--Little things.

I am sorry to have so little to *give* to our columns in the Cultivator, while I have so much to *receive*, both in the way of items and of general principles; but when I have received a little more I may perhaps have somewhat more to impart.

I should now be glad to know what occasions the cream frothing sometimes in churning, instead of turning to butter? How to prevent it? and how to deal with it when it has assumed this appearance?

The importance of little things, surely no one ought to be better persuaded of, than *the Housekeeper*, and perhaps it is as striking a characteristic, distinguishing a cultivated from an uncultivated mind, as any other;—the *due appreciation of little matters*. For example, the small matter of putting a broad hem on one end of the sheets and a narrow one on the other, (as recommended by our late editress,) if I had thought of it many years ago, it would have saved me *minutes* lost in marking the bottom ends; and, before I took the trouble and time to do this, some *vexations* when, notwithstanding directions given to the bed-makers as to laying the clothes when they took them off the beds, to insure a proper laying of them on,

they could not or would not attend to it; and their negligence at the same time was not easily detected. It is only a mind of some *practical reflection* that will promptly spend ten minutes now, to save one minute daily for ever, or say for ten years to come, and yet at the end of the ten years, thereby there will have been redeemed, if I mistake not, more than 60 hours.

Training Children.—Never allow them to see and admire what is right and good in the conduct of others, without, if practicable, very quickly putting them upon some way of *acting* accordingly.

L. P. C.

Fairfield co., Ohio, Jan. 1849.

Apple Custard.—To make the cheapest and best every day farmer's apple custard, take sweep apples that will cook, (such as every farmer ought to have through the summer, fall, winter, and spring,) pare, cut, and stew them; when well done, stir till the pieces are all broken; when cool, thin with milk to a proper consistency, and bake with one crust, like pumpkin pie. Eggs may be prepared and added with the milk if handy, though it will do without. No sweetening is necessary. It may be seasoned with any kind of spice to suit the taste—the less the better. H.

Morgan Co. O., 1849.

English Children.

Mrs. Kirkland in some notes of travel in England, thus speaks of the physical management of children in that country:

"Pretty children one sees in abundance everywhere—and so nicely kept! It seems to us that nobody knows so well how to take care for the physique of children as the English. They feed them with the simplest possible food, and are astonished when they hear that our young folks share the rich, heavy, high-seasoned dishes of their parents. Oatmeal porridge is considered a suitable breakfast for infant royalty itself; and a simple dinner at one o'clock, the proper thing for children whose parents dine sumptuously at seven. Exercise is considered one of the necessaries of life, and a daily walk or ride (not drive) in the fresh air, the proper form for it. It might be superfluous to notice anything so obvious if it were not that so many people in good circumstances with us, neglect this, and keep their children immured in nurseries, or cooped up in school-rooms, with no thought of exercise in the open air as amply requisite. We wish nothing so much for these benighted parents, as that they should once become acquainted with the habits and principles of a well ordered English nursery A reform in that quarter is much needed among us, and we know of no people so well able to be our instructors as the English, who have certainly brought the nursery system to great perfection, both as respects the comfort and advantage of the parents and children."

Female Education.

Female education is highly important as connected with domestic life. It is at home where man passes the largest portion of his time—where he seeks a refuge from the vexations and embarassments of business and enchanting repose from his exertions, a relaxation from care by the interchange of affections: where some of the finest sympathies taste moral and disinterested love—such as is seldom found in the walks of a selfish and calculating world. Nothing can be made desirable than to make the domestic abode the highest object and satisfaction.

"Well ordered home man's best delight to make,
And by submissive wisdom, modest skill,
With every gentle call eluding art,
To raise her virtues, animate her bliss
And sweeten all the toils of human life—
This the female dignity and praise.

Neither rank, nor splendid mansions, nor expensively furnished apartments, nor luxurious repasts, can accomplish these actions. They are to be obtained from the riches of elevated principles, from the nobility of virtue, from the splendor of a religious beauty, from the banquet of refined taste, affectionate deportment and intellectual pleasures. Intelligence and piety throw the brightest sunshine over private life, and these are the results of female education.—*Ex.*

THE HOME GONE.

BY G. S. BURLEIGH.

Ah, why should bitter tears be shed,
In sorrow, o'er the wounded sod,
When, verily, there are no dead,
Of all the children of our God?

They who are lost to outward sense,
Have but flung off their robes of clay,
And, clothed in heavenly radiance,
Attend us on our lowly way;

And oft their spirits breathe in ours
The hope, and strength, and love of theirs,
Which bloom, as bloom the early flowers
In breath of Summer's viewless airs;

And silent Aspirations start,
In promptings of their purer thought,
Which gently lead the troubled heart
To joys not even Hope had sought.

While sorrow's tears our eyes have wet,
Shed o'er the consecrated dust,
Too much our darkened souls forget
The lessons of enduring trust.

Not then we mark the cheering light
Of their serene and love-lit eyes,
Which look out from the Infinite
Like stars from yon unclouded skies.

Though sorrow brings her hidden Good,
And tears their dewy benison,
Not always o'er the spirit should
Their darkness overcast the sun.

The rain, whose blessed coming nurst
The sweetest flower of blushing Spring;
If through its cloud no sunlight burst,
Would blight her loveliest blossoming.

'Tis well the heart can loose its tide,
And gently pour the soothing tear,
When joyful Hope is crucified
In death-pangs of the loved and dear;

But when from their sepulchral pris'n
Their Angels roll the grief away,
Then yield we to the new aris'n
And own their everlasting sway;

With spirit-glance undimmed by tears
Look upward, and forget the clod,
For brighter than yon million spheres
They wheel around the throne of God;

And echoes from their choral song
Come quivering down the blue expanse,
Like murmurs from the insect throng
That on the beams of sunset dance.

Let living Trust serenely pour
Her sunlight on our pathway dim,
And Death can have no terrors more,
But holy Joy shall walk with him.

—*Nonpariel.*

Pride is the dainty occupant of our bosom, and yet never feeds on the meanness and infirmity of our kind.

The Markets.

English News, since our last, has shown a slight advance in prices of grain and flour, but it was not long maintained. Provisions continue in fair demand, and cotton has advanced in price.

Cincinnati, Jan. 13.—No material changes since our last. Hogs have declined, and now sell at $3,25 to $3,50 per 100 lbs. Beef Cattle continue in good demand—3,50@3,62 per 100 lbs. Flour brings 3,75@3,80 per bbl. Wheat 75 cts; Corn 28@30; Oats 28@29; Rye 50; Barly 55; Clover seed 3,50 per bushel. Butter for packers 10@11 cts; Cheese for shipping 6½ cents per lb. Eggs 17@18 cts per dozen.

Pittsburgh, Jan. 11.—Flour $4@4,12½ per bbl. Wheat 70 cts; Corn 33; Oats 28@30; Barley 50; Flax seed 95; Clover seed $3,25. Cheese 5½ to 6½ cts. Wool, full blood, 30 cts; ¾ do. 27; ½ do. 23; ¼ do. and common 20@22 cts. Hogs $3,25 per 100 lbs. Beef Cattle $3,50@$4,50

Cleveland, Jan. 10.—Flour (retail) $4,37@$4,50. Wheat 80@81 cts; Corn 40@41; Oats 23@25; Rye 50; Beans 75; Flax seed 75@80; Clover seed $3,25@3,30. Fine Salt $1,12½@1,25 per bbl. Pork, mess, $9@9,50.

GRASS SEEDS, &C.

THE subscribers are prepared to fill orders for every description of Grass and field seeds—composed, in part, of Clover, Timothy, Blue Grass, Herds Grass, Millet, Orchard Grass, Seed Wheet, Rye, Buckwheat, Lucerne, White Clover, Hemp and Canary seeds; together with all kinds of Garden Seeds, Fruit Trees, Shrubs, Evergreens, Plants, Grape Cuttings, Grape Roots, one and two years old, Osage Orange Plants, Osage Orange Seed, Strawberry Plants of every variety &c. at their seed store and Agricultural Warehouse. No. 33 and 35, Lower Market street, Cincinnati, Ohio. JOHN F. DAIR & Co.

N. B. A constant supply of Subsoil and other Plows.

OSAGE ORANGE SEED.

THE Subscriber has on hand a supply of Osage Orange seed warranted good, for sale at only $1 per quart—with a reduction at wholesale.

Full directions for preparing and sowing the seed, and planting and trimming hedges will be found in the 1st and 2d No's. of the Ohio Cultivator for 1849; copies furnished to all purchasers of seed.

☞ Office next door to the post office, up stairs.

M. B. BATEHAM,

Columbus, Jan, 15, 1849.

CANFIELD'S TREATISE ON SHEEP.

THIS work, bound in paper covers, may be obtained by sending 75 cents for each copy, in a letter post paid and directed to Aaron Hinchman, editor of the Homestead Journal, Salem, Columbiana co., O.—or to the author, J. T. Canfield, Canfield, Mahoning co. The postage on the work, to any part of the United States is 12½ cents. (Persons who prefer doing so, can enclose a $1 bill in a letter without paying the postage, and the work will be sent postage paid.)

Dutch Bulbs and other Flower Roots.

I HAVE received, by late arrival, my annual importation of Bulbous and other Flower Roots, consisting of over two hundred choice varieties of double and single Hyacinths of all colors; Early and late double and single Tulips, sweet scented Tulips; Polyanthes Narcissus; Crown Imperials; Amaryllis, Double and single Anemone; Ranunculus'; Fritillaria's; Gladiolus; martagon Lillies; yellow, blue, white and purple Crocus; Iris Susiana Major, &c.—The above imported direct from one of the most celebrated Florists in Harlem, Holland—have been received in excellent condition, and are all, especially the Hyacinths very large, and well ripened bulbs.

Seed store, Fifth street, north side, between Main and Sycamore, *Cincinnati.*

November 25, 1848. H. HUXLEY.

☞ ALSO, a few quarts of fresh Pear seeds, for sale as above. Price $5 per quart.

Advertisements suited to the character of this paper, are charged at the rate of 6 cents per line for the first, and 3 cents for each subsequent insertion.

THE HOME DOCTOR.

JUST PUBLISHED, a new and valuable book for every family in the country, and one that may be consulted with perfect safety. As its title page indicates, it is "THE HOME DOCTOR, or Family Manual, giving the causes, symptoms and Treatment of Diseases; with an account of the system while in health, and rules for preserving that state. Appended to which are recipes for making various medicines and articles of diet for the sick room. The whole written for general use and daily practice, by John B. Newman, M. D."

Also, accompanying this book, or separate, is "THE HERB BOOK a book devoted exlusively to Herbs, giving their names, varieties, description, medical properties and doses, use, time of gathering, and many other directions very useful for every family to know, and written expressly for family use."

The Herb Book is devoted solely to *Popular Medical Botany*, and will furnish on that point all the desired information wanted for general use.

The two books are put up and bound together and contain 200 pages, price 25 cents, or sold separate at 12½ cents.

The symptoms of each disease are carefully given, so that one kind may be recognized from another, to prevent practising in the dark; also, the treatment, a sketch of general physiology, and rules for keeping in health, together with observations on their causes, means of avoiding deleterious influences, and such other remarks as are deemed appropriate, for *both male and female.*

The book has been written with great care, in a plain, simple, common-sense style, easily to be understood by every person, and by a practical physician and thorough botanist. We can recommend it with entire confidence, as being a work superior in all respects to any book of the kind ever published, at the price. Whether well or sick, such a book should be in every house as a safe and sure adviser in time of need; the directions given for persons in health and sickness cannot be too strictly attended to by all.

The price at which the book is sold is so low that every family may have a copy, and none should be without it.

The book is put up in paper binding, and can easily be sent by mail. Postage only 6½ cents to any part of the United States.

☞ Any person sending us *one dollar* by mail, and paying postage on the letter, shall have four copies sent him *free of postage.*

Agents Wanted to circulate this book. A rare chance is offered to make money.

Orders solicited by us, at No. 6 Exchange street.

FISHER & Co.,
Booksellers and Publishers.

Rochester, N. Y, January, 1848.

OSAGE ORANGE SEED,

OF superior quality, at the lowest price, wholesale or retail.—This seed has been fully tested by numerous purchasers during the past season, and in all cases has given entire satisfaction. For sale at Seed Store, north side fifth street, between main and sycamore, Cincinnati.

Also—Grape vines, Fruit trees, Shrubs, Evergreens, Raspberry and Shruberry plants, etc. etc.

November 1, 1848. H. HUXLEY.

CONTENTS OF THIS NUMBER.

	Page.
Publishers notices and acknowledgments.....	17
Patent churns noticed and described,.....	18, 19
Osage Orange—Culture of Hedges,.....	20
A Good Book for Farmers; vegetable nutrition...	21
Experiments in Pork making, value of corn.....	22
Disease of Swine; Kidney worm &c.....	23
Culture of Sweet Potatoes.....	23
Editorial notices, publications, &c.....	24
Best drove of Cattle—Fairfield co. Ag. Society...	24
Husking corn—Plowing in or burning corn stalks	25
Horticultural Department—	
Report of O. Fruit Convention—A good move—Pruning Trees and Grapevines—List of Fruits for Ohio.....	25
Culture of Grapes; Pruning.....	26
Letter from H. N. Gillett, on color of fruits, &c.	27
Fruit Conventions, comparative benefits of,.....	28
On Horticulture, culture of Asparagus—Washington co. v. s. Morgan co. Apples.....	29
Housewife's Department—	
Letters to Housekeepers, No. 4—Inquiries about Churning; Little things.....	30
Apple custard—English Children—Female education—"The Home gone".....	31
The Markets—Advertisements.....	32